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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FP2005	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SG 2003/000261	International filing date (day/month/year) 10 November 2003 (10.11.2003)	Priority Date (day/month/year) 18 November 2002 (18.11.2002)
International Patent Classification (IPC) or national classification and IPC IPC⁷: C12Q 1/00, 1/68		
Applicant AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH		

1. This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I. ☒ Basis of the opinion
- II. ☐ Priority
- III. ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV. ☐ Lack of unity of invention
- V. ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI. ☐ Certain documents cited
- VII. ☐ Certain defects in the international application
- VIII. ☐ Certain observations on the international application

Date of submission of the demand <div style="text-align: center;">03.06.2004</div>	Date of completion of this report <div style="text-align: center;">1 April 2005 (01.04.2005)</div>
Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87 A-1200 Vienna Facsimile No. 1/53424/200	Authorized officer <div style="text-align: center;">MOSSER R.</div> Telephone No. 1/53424/437

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/SG 2003/000261

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☐ the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____.

☐ the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement) under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____.

☐ the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____.

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____.

☐ the claims, Nos. _____.

☐ the drawings, sheets/fig _____.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed“ and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.
PCT/SG 2003/000261

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement Novelty (N)	Claims 3-5, 15-30, 32-34	YES
	Claims 1, 2, 6-14, 35-46	NO
Inventive step (IS)	Claims 31	YES
	Claims 1-30, 32-46	NO
Industrial applicability (IA)	Claims 1-46	YES
	Claims —	NO

Citations and explanations (Rule 70.7)

The following documents have been cited in the Search Report:

D1: WO1999/060005 A1

D2: VAN BURIK, J.A. et al. Comparison of six extraction techniques for isolation of DNA from filamentous fungi. Medical mycology, 1998, Vol. 36, No. 5, pages 299 - 303, Medline-abstract [online], [retrieved on 30-03-2003]. Retrieved from: EPOQUE Medline Database, AN: NLM10075499

Present claim 31 concerns a micromechanical system which is especially used for the preparation and/or analysis of cell compounds such as nucleic acids. Such a micro-system with chambers connected with microtubes is also supported by the figures and the description. A device characterised by claim 31 is not obvious from D1 and D2. Claims 1-30 and 32-46 are not restricted to a microsystem. Most claims concern generally known steps which are performed when a DNA is isolated from biological material. These steps usually comprise any kind of mechanical disruption and/or a enzymatic lysis. Claims 1 and 2 as well as D1 and D2 concern simple well known nucleic acid isolation protocols. Claim 3 is the first claim concerning chambers. However, from this and the following claims which pertain to chambers it is not clear which kind of chambers are meant. Thus, these chambers may be ordinary reaction tubes which are used in many laboratories. D1 shows channels which are comparable with the disruption channels of the present application (see for example claim 5). Therefore, this document comes closer to the subject-matters of the claims than D2.

Claims 1, 2, 6-14, and 35-46 concern routine steps for e.g. DNA isolation which are either revealed in D1 and D2 or are so well known for a person who works in a laboratory that novelty is not recognized for the subject-matters of these claims. The remaining claims 3-5, 15-30 and 32-34 concern chamber systems. D1 also concerns a chamber system which influences cell disruption. Therefore, the subject-matters of these claims are obvious from this patent document.

Industrial applicability for the subject-matters of all claims is self-evident.